

Questions and Proposed Indicators for EPA's 2006 ROE Technical Document

AIR CHAPTER

OUTDOOR AIR QUALITY

- What are the trends in outdoor air quality and their effects on human health and the environment?

- [Acid Deposition](#)
- [Air Toxics Emissions](#)
- [Ambient CO Concentrations](#)
- [Ambient Concentrations of a Selected Air Toxic: Benzene](#)
- [Ambient Concentrations of Manganese Compounds](#)
- [Ambient Lead Concentrations](#)
- [Ambient Ozone Concentrations](#)
- [Ambient PM Concentrations](#)
- [Atmospheric Deposition of Mercury](#)
- [CO Emissions](#)
- [Concentrations of Ozone-depleting Substances](#)
- [Number and Percent of Days with AQI values greater than 100](#)
- [Lead Emissions](#)
- [Mercury Emissions](#)
- [NOx Emissions](#)
- [Ozone and PM for US/Mexico Border Counties](#)
- [Ozone Injury to Forest Plants](#)
- [Ozone Levels over North America](#)
- [PM Emissions](#)
- [SO2 Emissions](#)
- [Visibility](#)
- [VOC Emissions](#)

- What are the trends in greenhouse gas emissions and concentrations?

- [U.S. Greenhouse Gas Emissions](#)
- [Atmospheric Concentrations of Greenhouse Gases](#)

INDOOR AIR QUALITY

- What are the trends in indoor air quality and their effects on human health?

- [Blood Cotinine Level](#)
- [US Homes Above EPA's Radon Action Level](#)

WATER CHAPTER

WATER AND WATERSHEDS

- What are the trends in extent and condition of *fresh surface waters*?

- [Lake & Stream Acidity](#)
- Nitrate, Phosphorus, and Pesticides in Streams in Agricultural Watersheds
- Nitrogen and Phosphorus Discharges from Large Rivers

- What are the trends in extent and condition of *groundwater*?

- [Nitrate and Pesticides in Groundwater in Agricultural Watersheds](#)

- What are the trends in the extent and condition of *wetlands*?

- [Wetland Extent, Change, and Sources of Change](#)
- [Coastal Habitat Index](#)

- What are the trends in extent and condition of *coastal waters*?

- [Coastal Benthic Index](#)
- [Coastal Condition Index](#)
- [Coastal Sediment Quality Index](#)
- [Coastal Water Quality Index](#)
- [Extent of Hypoxia in the Gulf of Mexico and Long Island Sound](#)
- [Harmful Algal Bloom Outbreaks](#)
- [Submerged Aquatic Vegetation in Chesapeake Bay](#)
- [Chesapeake Bay Blue Crabs: Mature Females - Spawning Stock Abundance](#)

DRINKING WATER

- What are the trends in the quality of *drinking water*?

- [Populations Served by Community Water Systems with No Reported Health-Based Violations](#)

RECREATION IN AND ON THE WATER

- What are the trends in the condition of *recreational waters*?

CONSUMPTION OF FISH AND SHELLFISH

- What are the trends in the contamination/quality/safety of *consumable fish and shellfish*?

- [Coastal Fish Tissue Contaminants Index](#)

LAND CHAPTER

LAND COVER

- What are the trends in land cover and their effects on human health and the environment?
 - [Forest Extent and Type](#)
 - [Land Cover](#)

LAND USE

- What are the trends in land use and their effects on human health and the environment?
 - [Land Use](#)
 - [Urbanization and Population Change](#)

CHEMICALS

- What are the trends in chemicals used on the land and their effects on human health and the environment? (Chemicals to include toxic substances, pesticides, fertilizers, etc.)
 - [Fertilizer Applied for Agricultural Purposes](#)
 - [Pesticide Poisonings](#)
 - [Pesticide Residues in Food](#)
 - [Pesticide Resistant Arthropod Species](#)
 - [Reported Toxic Chemicals in Wastes Released, Treated, Recycled, or Recovered for Energy Use](#)

WASTE

- What are the trends in wastes and their effects on human health and the environment?
 - [Quantity of Municipal Solid Waste Generated and Managed](#)
 - [Quantity of RCRA Hazardous Waste Generated and Managed](#)

CONTAMINATED LANDS

- What are the trends in contaminated land and their effects on human health and the environment?
 - [Contaminated Groundwater Under Control on Contaminated Lands](#)
 - [Human Exposure Under Control on Contaminated Lands](#)

HUMAN HEALTH CHAPTER

HEALTH STATUS

- What are the trends in health status in the U.S.?

- [General Mortality](#)
- [Infant Mortality](#)
- [Life Expectancy](#)

HUMAN DISEASE AND CONDITIONS

- What are the trends in human disease and conditions for which environmental pollutants may be a risk factor including across population subgroups and geographic regions?

- [Asthma Prevalence & Mortality](#)
- [Birth Defects Incidence and Mortality](#)
- [Cancer Incidence & Mortality](#)
- [Childhood Asthma Prevalence & Mortality](#)
- [Childhood Cancer Incidence & Mortality](#)
- [COPD Mortality](#)
- [CVD Mortality](#)
- [Infectious Gastrointestinal and Arthropod-Borne Disease Prevalence](#)
- [Low Birthweight](#)
- [Preterm Delivery](#)

BIOMEASURES OF EXPOSURE

- What are the trends in biomeasures of exposure to common environmental pollutants including across population subgroups and geographic regions?

- [Blood Lead Level](#)
- [Blood Mercury Level](#)
- [Blood Cadmium Level](#)
- [Blood POPs Level](#)
- [Phthalate Exposure](#)
- [Urinary Pesticide/Herbicide level](#)

ECOLOGICAL CONDITION CHAPTER

EXTENT AND DISTRIBUTION OF ECOLOGICAL SYSTEMS

- What are the trends in the extent and distribution of the Nation's ecological systems?

- [Ecological Framework](#)
- [Extent of Coral Reef Cover](#)
- [Forest Pattern and Fragmentation](#)
- [Land Cover Change in the Puget Sound Basin](#)
- [Relative Ecological Condition of Undeveloped Land](#)

Presented in another chapter, referenced in Ecological Condition Chapter:

Land Cover (see Land chapter)

Land Use (see Land chapter)

Forest Extent and Type (see Land chapter)

Urbanization and Population Change (see Land chapter)

Wetland Extent, Change, and Sources of Change (see Water chapter)

Coastal Habitat Index (see Water chapter)

DIVERSITY AND BIOLOGICAL BALANCE

- What are the trends in the diversity and biological balance of the Nation's ecological systems?

- [Bird Populations](#)
- [Fish Faunal Intactness](#)
- [Non-Indigenous Species in the Estuaries of Oregon and Washington](#)
- [Terrestrial Plant Growth Index](#)
- [Threatened and Endangered Species](#)

Presented in another chapter, referenced in Ecological Condition Chapter:

Coastal Benthic Index (see Water chapter)

Harmful Algal Bloom Outbreaks (see Water chapter)

Submerged Aquatic Vegetation in Chesapeake Bay (see Water chapter)

Chesapeake Bay Blue Crabs: Mature Females–Spawning Stock Abundance (see Water chapter)

Pesticide Resistant Arthropod Species (see Land chapter)

ECOLOGICAL PROCESSES

- What are the trends in the ecological processes that sustain the Nation's ecological systems?

- [Forest Disturbance](#)

Presented in another chapter, referenced in Ecological Condition Chapter:

Nitrogen and Phosphorus Discharges from Large Rivers (see Water chapter)

CRITICAL PHYSICAL AND CHEMICAL ATTRIBUTES

- What are the trends in the critical physical and chemical attributes of the Nation's ecological systems?

- [Changing Streamflows](#)

- [Carbon Storage in Forests](#)
- [US and Global Mean Temperature and Precipitation](#)

Presented in another chapter, referenced in Ecological Condition Chapter:

Ozone Levels over North America (see Air chapter)
 Atmospheric Deposition of Mercury (see Air chapter)
 Acid Deposition (see Air chapter)
 Coastal Water Quality Index (see Water chapter)
 Coastal Sediment Quality Index (see Water chapter)
 Nitrate, Phosphorus, and Pesticides in Streams in Agricultural Watersheds (see Water chapter)
 Lake and Stream Acidity (see Water chapter)
 Extent of Hypoxia in Gulf of Mexico and Long Island Sound (see Water chapter)

BIOMEASURES OF EXPOSURE

- **What are the trends in biomeasures of exposure to common environmental pollutants in plants and animals?**

Presented in another chapter, referenced in Ecological Condition Chapter:

Coastal Fish Tissue Contaminants Index (see Water chapter)